

AMENDMENTS TO THE CLAIMS

A listing of all claims and their current status in accordance with 37 C.F.R. §1.121(2) is provided below.

1. – 9. (Cancelled)

10. (New) A network monitor configured to couple with a wire pair configured in a loop, the wire pair having a contact therein movable between a closed position and an open position, the network monitor comprising:

- a first port having:

- a first termination coupled with the wire pair on one side of the contact,

- a first transceiver chip coupled with the first termination and configured to convert signals sent over the wire pair from RS-485 voltage levels to standard levels,

- first isolator coupled with the first transceiver chip;

- a second port having:

- a second termination coupled with the wire pair on an opposite side of the contact,

- a second transceiver chip coupled with the second termination and configured to convert signals sent over the wire pair from RS-485 voltage levels to standard levels;

- a second isolator coupled with the second transceiver chip;

- a router coupled with the first port via the first isolator and coupled with the second port via the second isolator;

- a microcontroller coupled with the router, the first termination and the second termination;

- a third port configured to be coupled with a fire detector panel, the third port having:

- a third isolator coupled with the router,

a third RS-485 transceiver chip coupled with the third isolator, and termination jumpers coupled with the third transceiver chip, wherein the network monitor is configured to initiate one of a healing operation and a disconnect operation if an error ratio between good data detected by at least one counter and detected bad data detected by the at least one counter exceeds a preset limit.

11. (New) The network monitor of claim 10, wherein the at least one counter comprises:
 - a first counter configured to monitor transmissions from the fire detector control panel, wherein no data being transmitted from the fire detector control panel is considered to be good data, wherein the first counter is configured to have a first moving window of predetermined length, said error ratio being determined based on the moving window, and wherein, if the preset level is exceeded, the microcontroller is configured to instruct the router to disable the third port 16 until the ratio has fallen below the preset level.
12. (New) The network monitor of claim 11, wherein the at least one counter further comprises:
 - a second counter configured to check an integrity of the looped wire pair, wherein an absence of data at the first port and the second port is considered to be good data; wherein the second counter is configured to have a second moving window of a length that is about twice the predetermined length of the first counter.
13. (New) The network monitor of claim 12, wherein the at least one counter further comprises:
 - a third counter configured to monitor quality of all data seen by the first port and the second port. wherein an absence of any data is deemed to be bad data, and wherein the third counter is configured to have a third moving window having a length longer than that of the first and second counters.

14. (New) The network monitor of claim 13, wherein the length of the third moving window is twice the lengths of the first and second moving windows plus an amount of time required to complete the healing operation.

15. (New) The network monitor of claim 13, wherein the network monitor is a slave monitor that is configured to open the contact to generate a network collapse signal upon detecting an unacceptable error ratio.

16. (New) The network monitor of claim 13, wherein the network monitor is a master monitor that is configured to institute the healing operation following a network collapse via a signal that is transmitted either through the first port or the second port to ensure that the signal travels in a desired direction around the looped wire pair.

17. (New) The network monitor of claim 16, wherein the master monitor is further configured to direct a healing signal through the other second port or the first port so that the healing signal travels in an opposite direction around the looped wire pair.

18. (New) The network monitor of claim 17, wherein the master monitor is configured to close the contact at the end of the healing operation where an unrectified fault exists on the looped wire pair so that the master monitor acts as a slave monitor.